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Environmental Hotspot Alert

Only Scraps of the South American Atlantic Forest Remain—Eastern Paraguay

As dramatically shown in satellite images from 1973, 1985, and 2010, eastern Paraguay's subtropical rain forest has been almost totally converted to crops and cattle grazing

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Did You Know?

Every day, the Earth is bombarded with more than 100 tonnes of dust and sand-sized particles (NASA 2009).



Environmental Hotspot Alert

Thematic Focus: Resource Efficiency, Ecosystem Management, and Climate Change

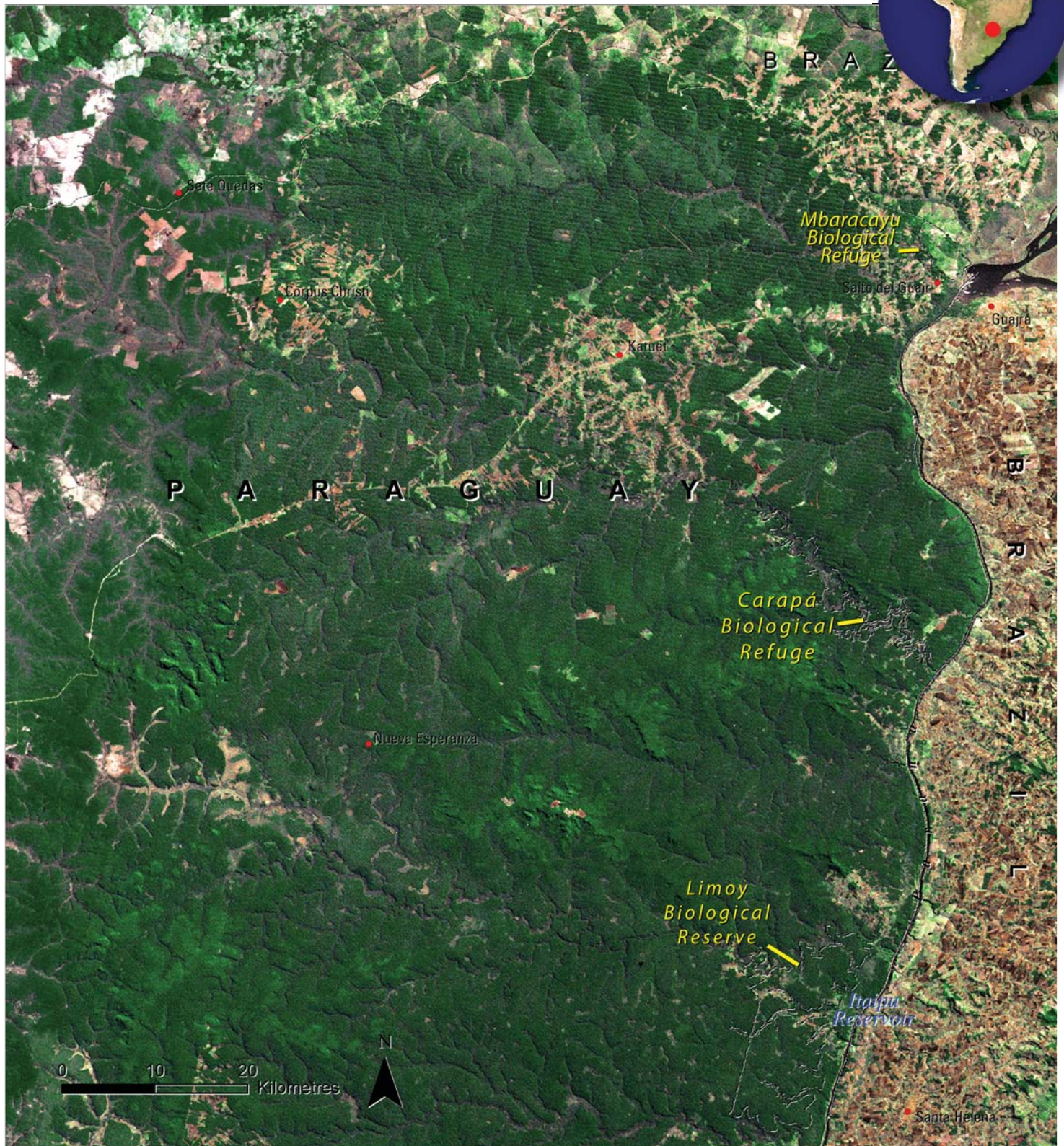
Only Scraps of the South American Atlantic Forest Remain Eastern Paraguay

Why is this issue important?

Prior to the mid-20th century, an extensive subtropical rain forest covered much of the Brazilian coastal plain, eastern Paraguay and part of northern Argentina. The

forest supported over 20 000 plant species, many of them endemic, as well as a diverse array of fauna. Beginning with selective logging prior to the 1940s, deforestation accelerated through the 1970s,

Figure 1: A 1970s Landsat satellite image shows dense green forest on the Paraguayan side of the border, farms on the Brazilian side.

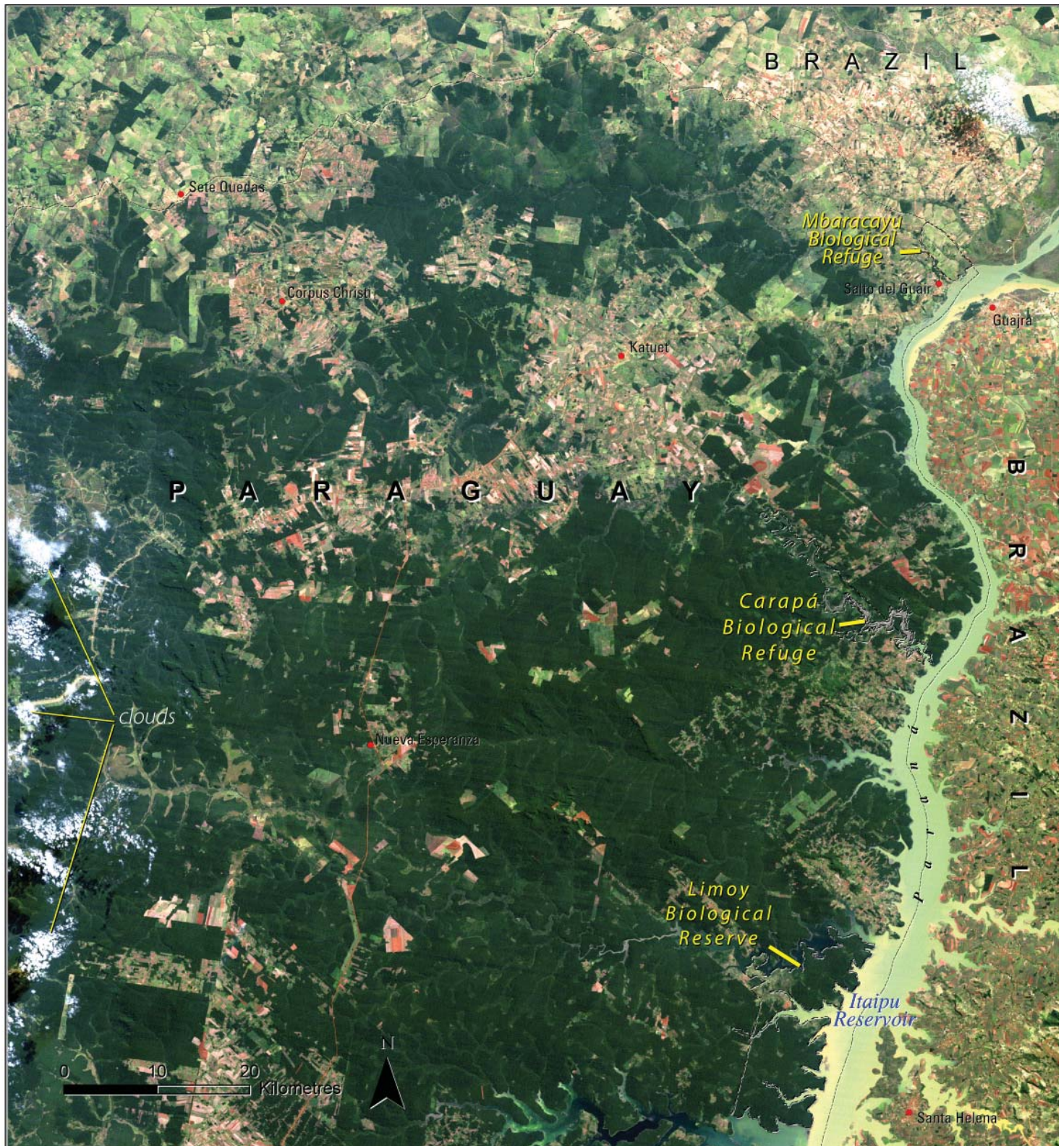


leaving less than 10 per cent of the original forest by early in the 21st century (Huang and others 2007, Huang and others 2009, Wayant and others 2010). Where these forests used to cover eastern Paraguay, farmland now dominates the landscape. Most of the forest clearance has been attributed to the advent of larger mechanized farms growing soy, cotton and sugar (Huang and others 2009). These remaining forests are of profound global importance due to both the biodiversity they contain and their potential to sequester carbon from entering the atmosphere.

What are the findings and implications?

The almost total conversion of eastern Paraguay's subtropical rain forest to agriculture and cattle grazing can be seen in the satellite images spanning the period between 1972 and 2010. The 1970s-era mosaic (Figure 1) shows largely intact forest on the Paraguayan side, in contrast to Brazilian farms just across the border. By the mid-1980s (Figure 2), large areas had been converted to farms but forest still dominated on the Paraguayan side. By 2010

Figure 2: The 1985 Landsat satellite image shows the green Paraguayan forest giving way to farm fields.



(Figure 3), the remaining forest can be seen as dark-green patches scattered among the large and small farm fields.

It is estimated that 40 per cent of Paraguay's subtropical rain forest was lost between 1989 and 2000. This is slightly less than the loss in Brazil and Argentina, however, leaving an estimated one-quarter of the original forest still largely intact

in Paraguay. A handful of national parks, biological reserves, biological refuges and national monuments provide some protection for these remnants, although significant losses have been measured even within protected areas (Huang and others 2007).

Figure 3: A 2010 Landsat satellite image shows only a few small patches of dark-green forest remaining, mostly within protected areas.



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Environmental Hotspot Alert

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Did You Know

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